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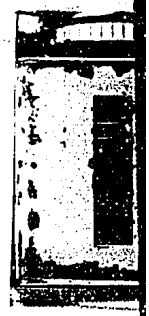

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TABLE SHOWING USSR ELECTRIC POWER DEVELOPMENT

The following table is a compilation of figures on the development of electric power in the USSR between 1885 and 1953, with plan figures to 1953. It is designed to serve as a basis for future exploitation by FDD of this subject and to give as over-all picture of electric power in the USSR on the basis of foreign documents.

The information in the table is presented under three headings: (1) installed capacity in thousands of kilowatts, with a breakdown by total capacity, capacity of TES (steam-electric power stations), and capacity of GES (hydro-electric power stations); (2) output in millions of kilowatt-hours, with the same breakdown; and (3) power per capita per year in kilowatt-hours.

All except three of the sources used to compile the table are Russian. Asterisks in the table indicate that figures are from non-Russian sources.

All documented figures are either taken as cited from the sources, in which case only the source is cited, or calculated on the basis of information contained in the sources. In the latter case the figures used as a basis for calculations are quoted in notes accompanying the sources to give the reader an opportunity to check the accuracy of the calculations. Undocumented figures are arrived at by simple arithmetic calculations of available figures.

Frequently, there are variations and discrepancies in Soviet figures which must be taken into account in appraising the accuracy of the table. The term "about" is used to modify figures under two circumstances: when it is used in the source, and when a figure is arrived at on the basis of an average between conflicting figures cited in different sources for the same year or period. The conflicting figures are cited together in the table and documented. A figure is followed by a question mark when it is calculated on the basis of plan figures whose accomplishment is not substantiated in any Russian sources.

/Letters in parentheses refer to appended sources./

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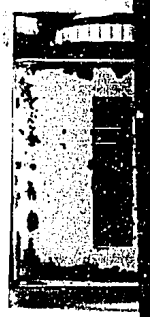

INSTALLED CAPACITY (IN THOUSANDS OF KILOWATTS)

At the End of the Year	Total		TES		GES	
	Total	Increase	Total	Increase	Total	Increase
1835	Firm TES(H) 0.505					
1900	80(H)	1,192				
1913	1,098(A)					
1917	1,192(A)		1,183		9(W)	
1920	1,140(X)	-52				
1921	1,228(A)	88				
1922	1,247(A)	19				
1923	1,279(A)	32		334		
1924	1,308(A)	29				100(O)
1925	1,397(A)	89				
1926	1,586(A)	189	1,517		69	60(O)
1927	1,698(A)	112	Abt 1,601	Abt 84	85.5(W)	
1928	1,905(A)	207			109	750(O)
1929	2,296(A)	391				771(H)
1930	2,876(A)	580		Abt 2,641		345(O)
1931	3,972(A)	1,096				
1932	4,677(A)	705	Abt 4,242		427.5(W)	
1933	5,583(A)	906			Abt 442	
1934	6,287(A)	704		Abt 1,892		1,500(O)
1935	6,914(M)	627	6,134	Abt 2,894	780(H)	500(O)
1936		Abt 1,203			1,026(W)	
1937	8,116(X) 8,117(L)		Abt 7,136	Abt 1,002	Abt 935	
1938	8,692(F) 8,542(L)	Abt 501				
1939	9,900(L)	Abt 1,683		Abt 1,628	1,540(W)	Over 600(U) Abt 556
1940	10,700(U)		Abt 8,764		1,533(O)	
1941					Abt 1,597	
1942						
1943		-5,000(R)		-4,321		-1,000(O)
1944						+ 260(O) - 740(O) (NET)
1945	Abt 5,300		Abt 4,443		Abt 857	

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1946		RESTORED: 5,000(R) PLANNED NEW: 11,700(R)	15,620 ?	PLANNED: + 740(O) +2,300(O) +3,040(O)
1947				
1948				
1949	PLANNED: *22,400(F)	TOTAL: 16,700		
1950	22,000?	20,063 ?	2,137(W)	
1951	ABT 25,200?	ABT 3,000(C)	18,361 ?	PLANNED: 4,276(N) PLANNED: 4,016(Y)
1952				
1953	ABT 44,600?	22,400(N)		
1954	ABT 44,800(N)		PLANNED: 6,153(Y) 6,400(W)	
1955		38,424 ?		

AT THE END OF THE YEAR	OUTPUT (IN MILLIONS OF KILOWATT-HOURS) TOTAL		TES		GES		POWER PER CAPITA PER YEAR (KW-H)
	TOTAL	INCREASE	TOTAL	INCREASE	TOTAL	INCREASE	
1885							
1900		2,575					
1913	1,945(A)						8-14(H)
1917	2,575(A)	-2,075					
1920	500(H,N)						
1921	520(A)	20					
1922	775(A)	255					
1923	1,146(A)	371					
1924	1,562(A)	416					
1925	2,925(A)	1,363					
1926	3,608(A)	683					
1927	4,205(A)	597	3,845		*360(B)		
1928	5,007(A)	802	4,807	ABT 8,993	200(P)	ABT 342	
1929	6,224(A)	1,217					
1930	8,368(A)	2,144					
1931	10,687(A)	2,319			704(P)		
1932	13,540(A)	2,853	ABT 12,838		*700(B)		

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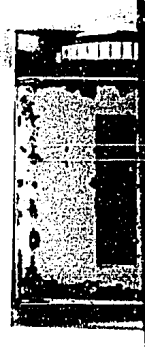

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1933	16,360(A)	2,820				
1934	21,010(A)	4,650				
1935	26,292(M)	5,282	ABT 20,522		ABT 3,668	
1936						
1937	36,400(X)	37,000(T)	ABT 33,360	2,912(P) *4,368(F)		215(U)
1938	39,600(S)	3,200				
1939			ABT 11,300		ABT. 1,395	
1940	48,300(R,N,I,U)	ABT 43,265		ABT 5,000(B) 5,071(P)		
1941	48,750(J)	450	43,632	ABT 367	5,118(O)	ABT 82
1942						
1943		-3,150				
1944						
1945	45,600(Q)		ABT 33,923			
1946	50,160(G)	4,560			ABT 7,994	
	57,750(Q)					
1947	57,900(G)	ABT 7,665				
1948	67,000(G)	ABT 9,175				
1949	78,800(G)	11,800				
1950	90,300(R)	11,500		13,725(P)		*400(F)
	104,000(N,E)	37,000(J)	ABT 77,188	12,500(D,R)		
1951	104,750(C)	ABT 14,075				OVER 500(V)
1952	117,000(K)	ABT 12,625				
1953						
1954		45,000?				
1955	PLANNED: 162,000(J)					

SOURCES

a. B. I. Veyts, Elektroenergetika SSSR (Electric Power Development in the USSR), Moscow, 1936

b. Soviet Studies, No 1, Vol IV, Oxford, Jul 52

c. V Pomoshch' Profsoyuznomu Aktivu, No 6, Moscow, Mar 52.

"Electric power production in 1951 was 116 percent of 1950 output. Total capacity of electric power stations put in operation in 1951 was about 3 million kilowatts."

d. Elektrichestvo, No 1, Moscow, Jan 52.

"The output of all the GES in 1950 was 2.5 times greater than 1940 output."

e. Pravda, Moscow, 7 Nov 51

f. Economic Geography, Vol 27, Clark University, April 1951.

"The output of GES in 1937 was 12 percent of the total output for the year."

g. Vestnik Statistiki, No 1, Moscow, 1950, page 9.

"If the electric power output in 1945 is taken as 100 percent, the output in 1946, 1947, 1948, and 1949 will be 110, 127, 147, and 173 percent, respectively."

h. A. V. Vinter, Itogi i Perspektivy Razvitiyu Sovetskoy Energetiki (Summary of Soviet Power Development and Outlook for the Future), Moscow, 1950

i. Soviet Affairs, No 207, Dept of State OIR Report No 4800.45, Sep 52, page 22

j. Pravda, 6 Oct 52.

"It is planned to produce 117 billion kilowatt-hours in 1952, i.e. 2.4 times more than in 1940." "During 1949 - 1950 - 1951 the output increased 37 billion kilowatt-hours."

k. Elektricheskiye Stantsii, No 1, Moscow, Jan 53

l. V.V. Veselovskiy, Kurs Ekonomiki i Planirovaniya Kommunal'nogo Khozyaystva (Course on Economics and Planning of Municipal Economy), Moscow, 1945

m. SSSR Strana Sotsializma (USSR Land of Socialism), Moscow, 1936

n. Izvestiya, Moscow, 10 Sep 52.

Ninety-six times more electric power was produced in 1940 than in 1920, when it was 500 million kilowatt-hours. During the Fifth Five-year Plan total capacity of electric power stations will be doubled and that of GES tripled.

o. Geografiya v Shkole, No 5, Moscow, Sep/Oct 52

"The electric power output of all the GES in 1941 was 10.5 percent of total output. It was planned to raise it in 1950 to 15.4 percent of that year's output." "The total capacity of the new GES planned for construction during the postwar Five-Year Plan was 2.3 million kilowatts, which is 1.5 times greater than the capacity of GES in operation at the outbreak of World War II." "The capacity of GES destroyed during the war was restored by 1950."

During World War II, GES with a total capacity of 260,000 kilowatts were built in the eastern regions of the USSR.

p. S. F. Shershov, Stalinskaya Elektrifikatsiya SSSR (Stalin Electrification of the USSR), Moscow, 1951.

"The electric power output of GES in percentage of the total output for the year was: in 1928, 4 percent; in 1932, 5.2 percent; in 1937, 8 percent; in 1940, 10.5 percent; and in 1950, 15.2 percent."

q. Pravda, 20 Jan 49.

"The electric power output in 1948 was 116 percent of 1947 output."

r. Bol'shevik, No 8, Moscow, Apr 51.

"The planned output for 1950 was 82 billion kilowatt-hours, i.e., 170 percent of 1940 output, but actually it was 187 percent. Output of GES in 1950 was 2.5 times the 1940 output."

s. Sovetskaya Estoniya, Tallin, 4 Oct 52

t. Znaniye Sila, No 10, Moscow, Oct 52

u. A. V. Vinter, Ot Perventsev Sovetskogo Gidroelektrostroitel'stva k Velikim Stroykam Kommunizma (From the Beginning of Soviet Hydroelectric Construction to the Great Projects of Communism), Moscow, 1951

v. S. Matskevich, Rol' Elektrifikatsii v Razvitii Material'no-Tekhnicheskoy Bazy Sel'skogo Khozyaystva SSSR (Influence of Electrification on the Development of Material and Technical Bases of Agriculture of the USSR), Moscow, 1952

w. Gidrotekhnicheskoye Stroitel'stvo, No 10, Moscow, Oct 52

"Between 1918 and the beginning of the First Five-Year Plan the following GES were built: Volkhovskaya GES [capacity 60,000 kilowatts(P)]; first aggregate of the Zemo-Avchal'skaya GES [12,000 kilowatts(P)]; and Yerevanskaya GES [4,500 kilowatts(P)]. At the end of the First Five-Year Plan the total capacity of GES was five times that 1927; at the end of the Second Five-Year Plan, 12 times that of 1927; and at the end of the Fourth Five-Year Plan, 25 times that of 1927."

x. A.V. Vinter, Velikiye Stroiki Kommunizma (Great Projects of Communism), Moscow, 1951

y. Pravda, 20 Aug 52

"Kuybyshevskaya GES, with a capacity of 2,100,000 kilowatts, and others with a total capacity of 1,916,000 kilowatts will be completed during the Fifth Five-Year Plan."

- E N D -